

## Uniglide/Uniglide Unicompartmental Knee Investigation

Note: This analysis compares the Uniglide/Uniglide femoral/tibial combination with all other unicompartmental knee prostheses.

This combination has been identified as having a significantly higher rate of revision. For a detailed explanation of the process used by the Registry that results in identification of prostheses that have a higher than anticipated rate of revision please refer to the Prostheses with Higher than Anticipated Rates of Revision chapter of the most recent AOANJRR Annual Report, <https://aoanjrr.sahmri.com/annual-reports-2023>.

Note: Procedures using prostheses with no recorded use in 2022 are excluded from the comparator.

### TABLE 1

#### Revision Rate of Primary Unicompartmental Knee Replacement

The revision rate of the Uniglide/Uniglide unicompartmental knee combination is compared to all other unicompartmental knee prostheses.

**Table 1: Revision Rates of Primary Unicompartmental Knee Replacement**

Component	N Revised	N Total	Obs. Years	Revisions/100 Obs. Yrs (95% CI)
Uniglide/Uniglide	187	756	8702	2.15 (1.85, 2.48)
Other Unicompartmental Knee	4860	48950	350591	1.39 (1.35, 1.43)
<b>TOTAL</b>	<b>5047</b>	<b>49706</b>	<b>359293</b>	<b>1.40 (1.37, 1.44)</b>

Note: Prostheses no longer used in 2022 are excluded from the comparator.

TABLE 2

### Yearly Cumulative Percent Revision of Primary Unicompartmental Knee Replacement

The yearly cumulative percent revision of the Uniglide/Uniglide unicompartmental knee combination is compared to all other unicompartmental knee prostheses.

**Table 2: Yearly Cumulative Percent Revision of Primary Unicompartmental Knee Replacement**

CPR	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	6 Yrs	7 Yrs	8 Yrs
Uniglide/Uniglide	4.8 (3.5, 6.6)	8.0 (6.3, 10.2)	10.7 (8.7, 13.1)	11.8 (9.7, 14.3)	12.9 (10.7, 15.5)	14.0 (11.7, 16.7)	15.9 (13.4, 18.7)	16.7 (14.2, 19.7)
Other Unicompartmental Knee	1.9 (1.8, 2.1)	3.5 (3.3, 3.7)	4.5 (4.4, 4.7)	5.5 (5.3, 5.7)	6.3 (6.1, 6.6)	7.2 (7.0, 7.5)	8.3 (8.0, 8.6)	9.4 (9.0, 9.7)

CPR	9 Yrs	10 Yrs	11 Yrs	12 Yrs	13 Yrs	14 Yrs	15 Yrs
Uniglide/Uniglide	19.2 (16.5, 22.2)	19.8 (17.0, 22.9)	20.3 (17.5, 23.4)	21.9 (19.0, 25.2)	24.4 (21.3, 27.8)	25.7 (22.5, 29.3)	26.7 (23.4, 30.4)
Other Unicompartmental Knee	10.6 (10.2, 10.9)	11.7 (11.3, 12.1)	13.1 (12.7, 13.5)	14.4 (14.0, 14.9)	15.8 (15.3, 16.3)	17.4 (16.9, 18.0)	18.8 (18.2, 19.4)

CPR	16 Yrs	17 Yrs	18 Yrs	19 Yrs	20 Yrs	21 Yrs	22 Yrs
Uniglide/Uniglide	27.9 (24.5, 31.8)	28.9 (25.2, 32.9)	30.8 (26.7, 35.4)				
Other Unicompartmental Knee	20.4 (19.7, 21.1)	22.1 (21.4, 22.9)	24.0 (23.2, 24.9)	25.7 (24.7, 26.7)	27.8 (26.6, 29.0)	29.7 (28.3, 31.2)	30.4 (28.7, 32.3)

Note: Prostheses no longer used in 2022 are excluded from the comparator.

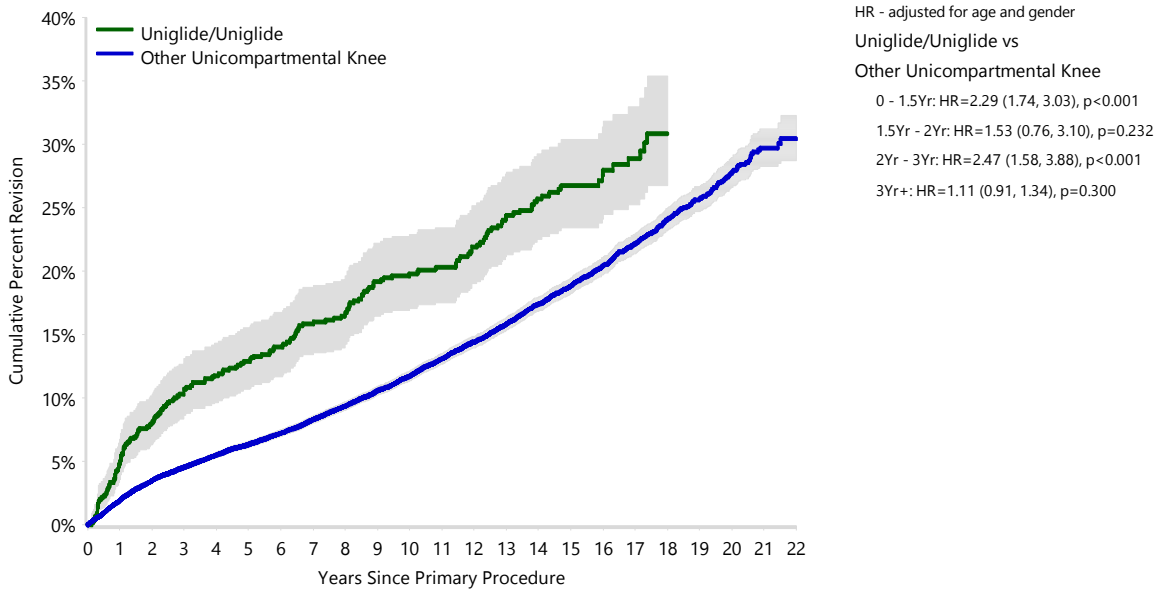
**FIGURE 1**

**Yearly Cumulative Percent Revision of Primary Unicompartmental Knee Replacement**

The yearly cumulative percent revision of the Uniglide/Uniglide unicompartmental knee combination is compared to all other unicompartmental knee prostheses. In addition, hazard ratios are reported.

Hazard ratios are reported for specific time periods during which the hazard ratio is constant. This is done to enable more specific and valid comparisons of the risk of revision over time. The pattern of variation in risk has important implications with respect to the underlying reasons for any difference.

**Figure 1: Cumulative Percent Revision of Primary Unicompartmental Knee Replacement**



Number at Risk	0 Yr	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	6 Yrs	7 Yrs	8 Yrs	9 Yrs	10 Yrs	11 Yrs
Uniglide/Uniglide	756	714	687	661	644	626	610	580	562	527	492	464
Other Unicompartmental Knee	48950	44516	40112	35992	31823	27703	23844	20641	18032	15724	13691	11855

Number at Risk	12 Yrs	13 Yrs	14 Yrs	15 Yrs	16 Yrs	17 Yrs	18 Yrs	19 Yrs	20 Yrs	21 Yrs	22 Yrs
Uniglide/Uniglide	426	377	323	253	175	129	56	27	0	0	0
Other Unicompartmental Knee	10031	8297	6758	5393	4149	3116	2243	1555	920	393	88

Note: Prostheses no longer used in 2022 are excluded from the comparator.

**TABLE 3****Primary Diagnosis for Revised Primary Unicompartamental Knee Replacement**

This table identifies the diagnosis of the primary procedure which was subsequently revised. This information is provided as there is a variation on outcome depending on the primary diagnosis. It is therefore important when considering the reasons for a higher than anticipated rate of revision that there is identification of the primary diagnosis. This information should be compared to the primary diagnosis for the revisions of all other unicompartamental knee prostheses.

**Table 3: Primary Diagnosis for Revised Primary Unicompartamental Knee Replacement**

Primary Diagnosis	Uniglide/Uniglide		Other Unicompartamental Knee	
	Number	Percent	Number	Percent
Osteoarthritis	186	99.5	4813	99.0
Osteonecrosis	1	0.5	27	0.6
Rheumatoid Arthritis			12	0.2
Other Inflammatory Arthritis			6	0.1
Fracture			1	0.0
Tumour			1	0.0
<b>TOTAL</b>	<b>187</b>	<b>100.0</b>	<b>4860</b>	<b>100.0</b>

Note: Prostheses no longer used in 2022 are excluded from the comparator.

TABLE 4

## Reasons for Revision

This is reported in two ways: a percentage of primary procedures revised and as a percentage of all revision procedures.

**% Primaries Revised:** This shows the proportional contribution of each revision diagnosis as a percentage of the total number of primary procedures. This percentage can be used to approximate the risk of being revised for that diagnosis. Differing percentages between groups, with the same distribution of follow up time, may identify problems of concern.

**% Revisions:** The number of revisions for each diagnosis is expressed as a percentage of the total number of revisions. This shows the distribution of reasons for revision within a group but cannot be used as a comparison between groups.

Table 4: Primary Unicompartmental Knee Replacement - Reason for Revision (Follow-up Limited to 19.9 Years)

Revision Diagnosis	Uniglide/Uniglide			Other Unicompartmental Knee		
	Number	% Primaries Revised	% Revisions	Number	% Primaries Revised	% Revisions
Progression Of Disease	53	7.0	28.3	1775	3.6	36.7
Loosening	70	9.3	37.4	1544	3.2	31.9
Pain	14	1.9	7.5	363	0.7	7.5
Infection	5	0.7	2.7	257	0.5	5.3
Bearing Dislocation	13	1.7	7.0	180	0.4	3.7
Fracture	5	0.7	2.7	142	0.3	2.9
Instability	5	0.7	2.7	89	0.2	1.8
Lysis	7	0.9	3.7	87	0.2	1.8
Wear Tibial Insert	5	0.7	2.7	73	0.1	1.5
Malalignment				60	0.1	1.2
Implant Breakage Tibial Insert	3	0.4	1.6	44	0.1	0.9
Patellofemoral Pain	1	0.1	0.5	31	0.1	0.6
Incorrect Sizing	1	0.1	0.5	28	0.1	0.6
Prosthesis Dislocation				28	0.1	0.6
Implant Breakage Tibial				26	0.1	0.5
Osteonecrosis	1	0.1	0.5	15	0.0	0.3
Wear Tibial				15	0.0	0.3
Metal Related Pathology	2	0.3	1.1	13	0.0	0.3
Synovitis				10	0.0	0.2
Arthrofibrosis				9	0.0	0.2
Implant Breakage Femoral				5	0.0	0.1
Wear Femoral				4	0.0	0.1
Patella Erosion	1	0.1	0.5	3	0.0	0.1
Tumour	1	0.1	0.5			
Other				37	0.1	0.8
<b>N Revision</b>	<b>187</b>	<b>24.7</b>	<b>100.0</b>	<b>4838</b>	<b>9.9</b>	<b>100.0</b>
<b>N Primary</b>	<b>756</b>			<b>48950</b>		

Note: This table is restricted to revisions within 19.9 years for all groups to allow a time-matched comparison of revisions.

Note: Prostheses no longer used in 2022 are excluded from the comparator.

**FIGURE 2**

**Cumulative Incidence Revision Diagnosis of Primary Unicompartmental Knee Replacement**

This figure details the cumulative incidence of the most common reasons for revision. The five most common reasons for revision are included as long as each of these reasons account for more than 10 procedures or at least 5% of all revisions for the Uniglide/Uniglide unicompartmental knee combination. A comparative graph is provided of the cumulative incidence for the same reasons for revisions for all other unicompartmental knee prostheses.

**Figure 2: Cumulative Incidence Revision Diagnosis for Primary Unicompartmental Knee Replacement**

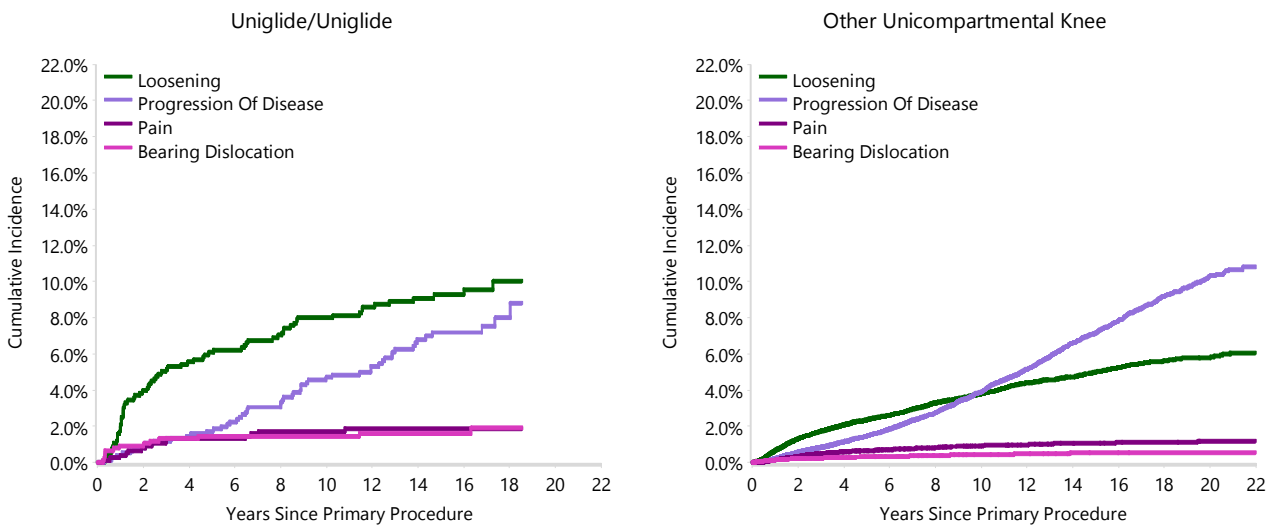


TABLE 5

**Type of Revision Performed for Primary Unicompartmental Knee Replacement**

This analysis identifies the components used in the revision of the Uniglide/Uniglide unicompartmental knee combination and compares it to the components used in the revision of all other unicompartmental knee prostheses.

The reason this analysis is undertaken is to identify whether there is one or more components which are being replaced that differ from the components replaced for revisions of all other unicompartmental knee prostheses i.e. is there a difference in the type of revision undertaken for the Uniglide/Uniglide unicompartmental knee combination compared to all other unicompartmental knee prostheses.

**Table 5: Primary Unicompartmental Knee Replacement - Type of Revision (Follow-up Limited to 19.9 Years)**

Type of Revision	Uniglide/Uniglide		Other Unicompartmental Knee	
	Number	Percent	Number	Percent
TKR (Tibial/Femoral)	147	78.6	4083	84.4
Uni Tibial Component	7	3.7	99	2.0
Uni Femoral Component	2	1.1	51	1.1
Cement Spacer	2	1.1	39	0.8
UKR (Uni Tibial/Uni Femoral)	2	1.1	35	0.7
Patella/Trochlear Resurfacing			17	0.4
Removal of Prostheses			5	0.1
Femoral Component			4	0.1
Reinsertion of Components			4	0.1
Tibial Component			2	0.0
<b>N Major</b>	<b>160</b>	<b>85.6</b>	<b>4339</b>	<b>89.7</b>
Uni Insert Only	25	13.4	498	10.3
Patella Only	2	1.1	1	0.0
<b>N Minor</b>	<b>27</b>	<b>14.4</b>	<b>499</b>	<b>10.3</b>
<b>TOTAL</b>	<b>187</b>	<b>100.0</b>	<b>4838</b>	<b>100.0</b>

Note: This table is restricted to revisions within 19.9 years for all groups to allow a time-matched comparison of revisions.

Note: Prostheses no longer used in 2022 are excluded from the comparator.

**TABLE 6****Revision Rates of Uniglide/Uniglide Primary Unicompartmental Knee Replacement by Fixation**

This analysis is provided as some prostheses have more than one fixation option. Additionally there are prostheses where an alternative to the recommended approach to fixation was used e.g. a cementless prosthesis that has been cemented or vice-versa.

**Table 6: Revised Number of Uniglide/Uniglide Primary Unicompartmental Knee Replacement by Fixation**

Fixation	N Revised	N Total
Cemented	63	356
Cementless	66	227
Hybrid (Tibial Cemented)	52	155
Hybrid (Tibial Cementless)	6	18
<b>TOTAL</b>	<b>187</b>	<b>756</b>



TABLE 7

**Revision Rates of Primary Unicompartmental Knee Replacement by State**

This enables a state by state variation to be identified for the Uniglide/Uniglide unicompartmental knee combination and provides the comparative data for each of the states for all other unicompartmental knee prostheses.

The purpose of this analysis is to determine if the higher than anticipated rate of revision has widespread distribution between states. If there is widespread distribution then the reason for the higher than anticipated rate of revision is unlikely to be surgeon specific. If the prosthesis has been used in only a small number of states it is not possible to distinguish if the higher than anticipated rate of revision is related to the prosthesis, surgeon, technique or patient.

**Table 7: Revised Number of Primary Unicompartmental Knee Replacement by State**

Component	State	N Revised	N Total
Uniglide/Uniglide	NSW	116	536
	VIC	31	109
	QLD	2	7
	SA	37	103
	TAS	1	1
Other Unicompartmental Knee	NSW	1478	12842
	VIC	921	10727
	QLD	856	9759
	WA	580	7520
	SA	671	5120
	TAS	181	1899
	ACT/NT	173	1083
<b>TOTAL</b>		<b>5047</b>	<b>49706</b>

Note: Prostheses no longer used in 2022 are excluded from the comparator.

**TABLE 8****Number of Revisions of Uniglides/Uniglides Primary Unicompartmental Knee Replacement by Year of Implant**

This analysis details the number of prostheses reported each year to the Registry for the Uniglides/Uniglides unicompartmental knee combination. It also provides the subsequent number of revisions of the primaries reported in that year.

Primary procedures performed in later years have had less follow up time therefore the number revised is expected to be less than the number revised in earlier years. For example, a primary procedure performed in 2022 has a maximum of one year to be revised, whereas a primary procedure performed in 2020 has a maximum of three years to be revised.

**Table 8: Number of Revisions of Uniglides/Uniglides Primary Unicompartmental Knee Replacement by Year of Implant**

Year of Implant	Number Revised	Total Number
2003	28	80
2004	21	66
2005	37	123
2006	20	84
2007	20	107
2008	15	93
2009	16	61
2010	6	30
2011	13	38
2012	5	25
2013	3	22
2014	0	9
2015	0	5
2016	2	8
2017	1	3
2019	0	1
2020	0	1
<b>TOTAL</b>	<b>187</b>	<b>756</b>

TABLE 9

**Revision Rates of Uniglide/Uniglide Primary Unicompartmental Knee Replacement by Catalogue Number Range**

Many prostheses have a number of catalogue ranges. The catalogue range is specific to particular design features; more than one catalogue range usually indicates a minor difference in design in a particular Uniglide/Uniglide prosthesis.

This analysis has been undertaken to determine if the revision rate varies according to the catalogue number range.

Model	Catalogue Range	Catalogue Description	Cement	Mobility	Material	Coating
<b>Femoral</b>						
Uniglide	5140200-5140400	COCR HA TINI UNI FEMORAL COMPONENT	NO			HA COATED
Uniglide	5150200-5150400	COCR TINI UNI FEMORAL COMPONENT	YES			
<b>Tibial</b>						
Uniglide	5240200-5240800	COCR TINI UNI TIBIAL COMPONENT	YES			
Uniglide	5250200-5250800	COCR HA TINI UNI TIBIAL COMPONENT	NO			HA COATED
Uniglide	5301307-5301713	UNIGLIDE FIXED TIBIA	YES	FIXED	NON CROSS-LINKED POLYETHYLENE	

**Table 9: Revised Number of Uniglide/Uniglide Primary Unicompartmental Knee Replacement by Catalogue Number Range**

Femoral Range	Tibial Range	N Revised	N Total
5140200-5140400	5240200-5240800	24	70
	5250200-5250800	67	228
	5301307-5301713	28	86
5150200-5150400	5240200-5240800	53	317
	5250200-5250800	6	18
	5301307-5301713	9	37
<b>TOTAL</b>		<b>187</b>	<b>756</b>